

TIME-REUSE AND CODE-REUSE PARTITIONING SYSTEMS AND
METHODS FOR CELLULAR RADIOTELEPHONE SYSTEMS

Abstract of the Disclosure

Time slots of a plurality of time-division multiple access (TDMA) cellular radiotelephone base stations are synchronized. Cellular radiotelephone frequencies are allocated among the plurality of base stations according to a first frequency allocation system in a first synchronized time slot and according to a second frequency allocation system in a second synchronized time slot. Each frequency allocation system may include an adaptive channel allocation system, a frequency reuse system, a frequency reuse partitioning system or a fixed frequency reuse system. Spreading codes of a plurality of code-division multiple access (CDMA) cellular radiotelephone base stations are synchronized. Cellular radiotelephone frequencies are allocated among the plurality of base stations according to a first frequency allocation system for a first synchronized spreading code and according to a second frequency allocation system for a second synchronized spreading code. Each frequency allocation system may include an adaptive channel allocation system, a frequency reuse system, a frequency reuse partitioning system or a fixed frequency reuse system. Cellular radiotelephone systems and methods affording increased base station channel capacity, more efficient spectrum utilization and improved equipment migration are thus provided.